Appendix H. Prioritization Approach A Used to Identify Top Finfishes for Fishery Management Plans

Species of greater concern are identified by evaluating their exploitation history in combination with their productivity. Exploitation history was based on the amount and trends of sport and/or commercial landings over the past 20 years, taking into consideration effort, market conditions, regulations, oceanographic conditions, and other factors.

A species' productivity was determined by comparing several of its life history parameters to the following table (modified from Musick et al., 2000):

	Productivity Category			
Parameter	High	Medium	Low	Very Low
r (yr-1)	>0.5	0.16-0.50	0.05-0.15	<0.05
von Bertalanffy k	>0.3	0.16-0.30	0.05-0.15	<0.05
Fecundity (yr-1)	$>10^3$	10^2-10^3	10^1<10^2	<10
Age at maturity	<1 yr	2-4 yr	5-10 yr	>10 yr
Maximum age	1-3 yr	4-10 yr	11-30 yr	>30 yr

where:
r (yr-1)= the intrinsic rate of increase of the population.
von Bertalanffy k = a growth equation constant indicating the rate of growth approaching maximum size.
fecundity (yr-1)= the number of eggs or offspring produced per year.
age at maturity= the age at which the species first becomes sexually mature.
maximum age= the life span of a species.

A species was classified according to the lowest productivity category for which data were available. Those species that had low or very low productivity for one or more of the parameters, along with declining landings trends were identified as species of greatest concern.